



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street  
San Francisco, CA 94105-3901

August 31, 2015

Bob Bond  
California Resources Corporation  
10800 Stockdale Highway  
Bakersfield, CA 93311

Dear Mr. Bond:

EPA is in receipt of Elk Hill's Power's (EHP) application for an aquifer exemption of the Tulare Formation in T31S R23E, Sections 1B and 2B for injection of non-hazardous industrial waste into Class I wells. This aquifer exemption (AE) application and EHP's proposal to relocate its Class I wells to this area was predicated on preliminary findings described in a February 11, 2015 letter from the State Water Resources Control Board (Water Board) to the Division of Oil, Gas, and Geothermal Resources (DOGGR). As you are aware, the Water Board and DOGGR have now further reviewed the relevant documentation pertaining to a potential exemption of previously identified portions of the Tulare Formation in the Elk Hills field, including the southwestern flank of the anticlinal structure of the field, which includes the aforementioned sections. As the state's ongoing review is focused specifically on the areas that EHP has identified for proposed Class I injection, EPA will be considering these state agencies' views in our evaluation of EHP's AE application. In addition, the state agencies are keeping EPA informed about their review of a proposed aquifer exemption for Class II injection wells for portions of the Tulare Formation beneath additional sections of the Elk Hills field.

As we have previously communicated, Class I and Class II wells are subject to different regulatory requirements under the Safe Drinking Water Act. In 40 CFR Part 146, Subpart B – Criteria and Standards Applicable to Class I Wells, it states that "All Class I wells shall be sited in such a fashion that they inject into a formation which is beneath the lowermost formation containing ... an underground source of drinking water." (See 40 CFR section 146.12(a)). As such, we continue to have concerns that the existing wells and the newly proposed wells rely on injection into an underground source of drinking water (USDW). Even as we continue to consult with the state on the potential to exempt portions of the Tulare in the Elk Hills Field, we reiterate our previous comment encouraging EHP to revisit other potential approaches, including recompletion of the existing Class I UIC wells into a formation that would be appropriate for such injection, or relocating the proposed new wells into an aquifer that is not a USDW. Note that either of these approaches would likely obviate the need for a Class I AE in the Elk Hills Field.

We acknowledge receipt of information you submitted to supplement your AE application in the form of three memoranda: June 8, 2015 "Assessment of Deeper Zones for Disposal of Elk Hills Power Plant Wastewater"; June 18, 2015 "Responses to Follow-up Comments Regarding Deeper Zone Disposal of Elk Hills Power Plant Wastewater"; and undated "San Joaquin Formation as a Potential Alternative for Disposal of the Elk Hills Power Plant Wastewater". As we discussed during our call of August 25, 2015 we have reviewed the information provided in these documents and would urge EHP to explore these alternatives beyond the level of detail provided therein. For example, the statement in the June 18 memo regarding deeper disposal at the current location: "At a minimum, larger pumps would be necessary for injection into deeper and higher pressured intervals", amounts to a cursory treatment of

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this alternative. Such a minimal, subjective analysis precludes EPA from reasonably considering the viability of this option as an alternative means of disposal. Similarly, for example, the June 8 memo refers to needing additional injection wells (6 more) for disposal into the San Joaquin Formation in the new proposed locations (TDS 37,300 ppm reported by EHP), but eliminates this option based on unsubstantiated statements.

In light of the foregoing, we have agreed with the state agencies to defer our further evaluation of the Class I UIC AE package for EHP, pending the state's resolution of CRC's request for Class II related aquifer exemptions in the Tulare Formation of the Elk Hills field. We understand that the state and CRC are making progress in this matter, and that it is expected to be settled within a reasonable timeframe. We will monitor the outcome. In addition, as stated previously, serious attention to the possibility of Class I disposal into a non-USDW could also move EHP's UIC permitting process with EPA forward.

If you have any questions about this matter, please don't hesitate to contact me at (415) 972-3971.

Sincerely,

A handwritten signature in black ink, appearing to read 'D Albright', with a stylized flourish at the end.

David Albright

Manager, Drinking Water Protection Section

cc: Steve Bohlen, State Oil and Gas Supervisor, CA DOGGR  
Jonathan Bishop, Chief Deputy Director, CA SWRCB